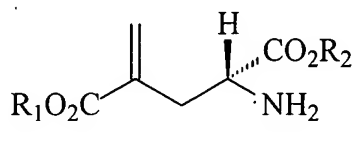


COMPLETE CLAIM LISTING (Marked-up)

1. (currently amended) A process for synthesizing substantially enantiomerically pure 4-methylene-L-glutamic acid and ~~analog~~ esters thereof having the formula



wherein R₁ and R₂ are individually hydrogen or C₁-C₆ alkyl, said process comprising the steps of:

- a. providing a (2S)-pyroglutamic acid or ester ~~a derivative~~ thereof as a starting material;
 - b. converting the starting material to a 4-enamine ~~derivative~~ pyroglutamic acid intermediate or ester thereof;
 - c. hydrolyzing the 4-enamine intermediate ~~derivative~~ to a 4-hydroxymethylidene [derivative] pyroglutamic acid intermediate or ester thereof; and
 - d. reducing the 4-hydroxymethylidene intermediate ~~derivative~~ to a 4-methylene pyroglutamic acid or ester ~~derivative of pyroglutamic acid or an ester~~ thereof;
 - e. reacting the 4-methylene pyroglutamic acid with a strong base to form linear 4-methylene glutamic acid, or esters and salts thereof.
2. (original) The process of Claim 1 wherein step b includes reacting the starting material with an amide or an acetal.

3. (original) The process of Claim 2 wherein step b includes reacting the starting material with an acetal at a temperature ranging from 70 °C to 130 °C.
4. (currently amended) The process of Claim 1 wherein step c includes reacting the 4-enamine intermediate [derivative] with a strong acid.
5. (currently amended) The process of Claim 1 wherein step d includes reacting the 4-hydroxymethylidene intermediate [derivative] with a carbonate salt.
6. (original) The process of Claim 1 wherein the strong base is lithium hydroxide.
7. (original) The process of Claim 3 wherein the temperature ranges is from 105 °C to 115 °C.